

ABSTRACT

A method for X-ray analysis of a sample includes aligning an optical radiation source with an X-ray excitation source, so that a spot on the sample that is irradiated by an X-ray beam generated by the X-ray excitation source is illuminated with optical radiation generated by the optical radiation source. Optical radiation that is reflected from the sample is used to generate a first signal, which is indicative of an alignment of the spot on the sample. The X-ray beam is aligned, responsively to the first signal, so that the spot coincides with a target area of the sample. X-ray photons received from the spot on the sample, after aligning the X-ray beam, are used in generating a second signal that is indicative of a characteristic of the target area.